REMARKS

By this amendment, claims 2, 3, 14, 15 and 23 have been cancelled and claims 1, 4-6, 13, 16-22 and 24-33 have been amended. Claims 8-12 and 34-41 have been previously cancelled. Accordingly, claims 1, 4-7, 13, 16-22 and 24-33 are currently pending in the application, of which claims 1, 13 and 19 are independent claims.

In view of the above amendments and the following Remarks, Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

Oath/Declaration

In the Office Action, the Examiner stated that the Oath/Declaration is defective because the mailing address of each inventor was not identified.

In response, Applicants submits a copy of Applicant's Statement on Complete Post Office Address Under 37 CFR §1. 33, which was submitted on August 6, 2003 during the examination of the parent application No. 09,837,374.

Claim Objection

In the Office Action, Claim 2, 4, 13, 14, 17, 23 and 27 have been objected to for informalities. This objection is respectfully traversed.

In this response, claims 2, 14 and 23 have been cancelled. Claims 4, 13, 17 and 27 have been amended to correct the informalities therein. Accordingly, Applicants respectfully request withdrawal of the objection for claims 2, 4, 13, 14, 17, 23 and 27.

Abstract Objection

The abstract of the disclosure is objected to for informalities. In this response, the abstract has been amended to correct the informalities therein, as attached in a separated letter. Thus, withdrawal of the objection is respectfully requested.

Rejections Under 35 U.S.C. §112, second paragraph

Claims 31-33 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite. Particularly, the Examiner stated "it is unclear how the thickness of the first portion is less than the half of the thickness of the second portion since the instant claim depends on claim 27 which recites "a second portion having a second thickness [larger] than the first portion" (Office Action, page 3). Applicants respectfully traverse this rejection for at least the following reasons.

Amended claim 31 recites "the first thickness is less than a half of the second thickness". Claim 27 recites "a first portion having a first thickness, a second portion having a second thickness greater than the first thickness". There is no contradiction between claims 27 and 31.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §112, second paragraph rejection of claims31-33.

Rejections Under 35 U.S.C. §102

Claims 1, 2, 6, 7, 13, 14, 18-21, 23 and 26-33 stand rejected under 35 U.S.C. §102(e) as being anticipated by U. S. Patent No. 6,287,899 issued to Park, *et al.* ("Park"). Applicants respectfully traverse this rejection for at least the following reasons.

In this response, independent claim 1 has been amended to incorporate the limitations of claims 2 and 3. The Office Action indicates that claim 3 is patentable over Park. Thus, it is

submitted that amended claim 1 is patentable over Park. Claims 6 and 7 that are dependent from claim 1 would be also patentable at least for the same reason.

Independent claim 13 has been also amended to incorporate the limitations of claims 14 and 15. The Office Action indicated that claim 14 is patentable over Park. Thus, it is submitted that amended claim 13 is patentable over Park. Claim 18 that is dependent from claim 13 would be also patentable at least for the same reason.

Independent claim 19 has been amended to incorporate the limitations of claims 22 and 23. The Office Action indicates that claim 22 is patentable over Park. Thus, it is submitted that amended claim 19 is patentable over Park. Claims 20, 21 and 26-33 that are dependent from claim 19 would be also patentable at least for the same reason.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §102(e) rejection of claims 1, 2, 6, 7, 13, 14, 18-21, 23 and 26-33.

Rejections Under 35 U.S.C. §103

Claims 3, 4, 15 and 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Park in view of U. S. Patent No. 4,181,564 issued to Fogarty, *et al.* ("Fogarty"). Applicants respectfully traverse this rejection for at least the following reasons.

With respect to claims 3 and 4, the limitation of claim 3 has been incorporated into claim 1 and claim 3 has been cancelled. Claim 4 is dependent from claim 1. As previously mentioned, claim 1 is patentable over Park. For example, as the Examiner admitted, "Park fails to disclose the deposition condition for the silicon nitride insulating layer at a temperature in the range of 280-400°C for a period in the range of 5-40 minutes" (Office Action, page 7).

Regarding this missing feature, the Examiner stated "Fogarty ... suggests forming a silicon nitride layer at a temperature in the range of 270-375°C for a period in the range of about 45 minutes" (Office Action, page 7). On this basis, the Examiner asserted "It would have been obvious to one of ordinary skilled in the art at the time of the invention was made to modify the process of Park as suggested by Fogarty". This assertion is respectfully disagreed with.

Park is directed to manufacturing a thin film transistor array for *a liquid crystal display*, particularly to *reducing the number of the processing steps* by using a mask having portions with different light transmittance. Fogarty is directed to fabricating of integrated circuits "*such as bipolar or MOS memory circuits*" (Column 1, lines 11-12), particularly to *control the slope of sidewalls* of the opening in a silicon nitride layer. Park and Fogarty are directed to two different fields of endeavor, and the purpose disclosed by Fogarty would not have been recognized in the pertinent prior art of Park. Thus, there is no motivation for the asserted combination.

Also, the Examiner stated "it would have been obvious to ... to select a temperature and time within the ranges as taught by Fogarty ..." (Office Action, page 8). This assertion is respectfully disagreed with.

The operational principle of Fogarty is incrementally decreasing the wafer temperature during the deposition of the silicon nitride layer. For example, "the wafers were initially heated to a temperature of 375 degrees C at the time of activation of the rf power source. At intervals of approximately 10 minutes, the rheostat was set to lower the temperature approximately 25 degree C. A final temperature setting of 270 degrees C was made after 40 minutes and maintained until the end of the deposition" (column 3, lines 18-24). This operational principle "produces sloped sidewalls without the necessity of this careful control of etching time ... the angel of the sidewalls at the deposition surface should be less than 60 degrees" (column 4, lines 1-5).

If this principle is altered such that the wafer temperature is not incrementally decreased during the deposition of the silicon nitride layer, the sloped sidewalls would not be formed. Therefore, it would not have been obvious to select a temperature and time within the ranges as taught by Fogarty. Thus, there is no motivation for the asserted modification.

For these reasons, it is submitted that claim 1 is patentable over Park and Fogarty. Claim 4 that is dependent from claim 1 would be also patentable at least for the same reason.

Claim 15 is dependent from claim 13. Amended claim 13 recites "depositing a silicon nitride layer over the gate wire at a temperature between about 280° C and about 400° C to form a gate insulating layer". As previously mentioned, this claimed feature is patentable over Park and Fogarty. Thus, it is submitted that claim 15 is also patentable at least for the same reason.

Claim 22 is dependent from claim 19. Amended claim 19 recites "depositing a silicon nitride layer at a temperature between about 280° C and about 400° C to form a gate insulating layer". As previously mentioned, this claimed feature is patentable over Park and Fogarty. Thus, it is submitted that claim 22 is also patentable at least for the same reason.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 3, 4, 15 and 22.

Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Park. This rejection is respectfully traversed. In this response, claim 1 has been amended to incorporate the limitation of claim 3, which was indicated as patentable over Park. No secondary reference has been introduced to cure the deficiency from Park. Thus, the subject matter of claim 1 would not have been obvious from Park. Claim 5 that is dependent from claim 1 would be patentable at

least for the same reason. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claim 5.

In the Office Action, claims 16, 17, 24 and 25 stand rejected uner 35 U.S.C. §103(a) as being unpatentable over Park in view of U. S. Patent No. 6,399,222 issued to Aria, et al. ("Aria"). This rejection is respectfully traversed.

Claims 16 and 17 are dependent from claim 13. As previously mentioned, claim 13 has been amended to incorporate the limitations of claims 14 and 15. The Office Action indicated that claim 15 is patentable over Park and Aria. Thus, it is submitted that claim 13 is patentable over Park and Aria. Claims 16 and 17 that is dependent from claim 16 would be also patentable at least for the same reason.

Claims 24 and 35 are dependent from claim 19. As previously mentioned, claim 19 has been amended to incorporate the limitations of claims 22 and 23. The Office Action indicated that claim 22 is patentable over Park and Aria. Thus, it is submitted that claim 19 is patentable over Park and Aria. Claims 24 and 25 that are dependent from claim 19 would be also patentable at least for the same reason.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 16, 17, 24 and 25.

Other Matters

In addition to amendment made to independent claims 1, 13 and 19, as mentioned above, claims 1, 4-6, 13, 16-22 and 24-33 have been amended for the purposes of better wording,

clarification and informality correction only. This amendment is not made for the purpose of avoiding prior art or narrowing the claimed invention.

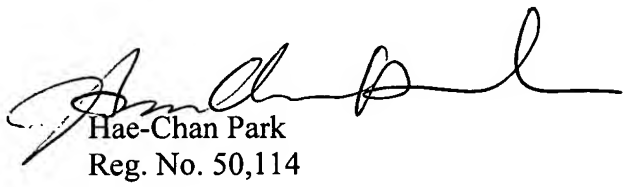
CONCLUSION

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated objections and grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,



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ATTACHMENT: Applicant's Statement filed on August 6, 2003 in the parent application, U.S. Application No. 09/837,374.